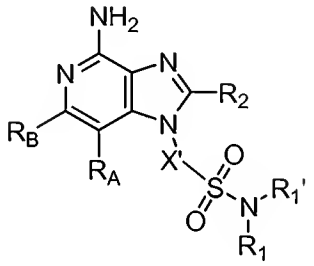
Amendments to the Claims

This listing of the claims will replace all prior versions, and listings, of claims in the present Application.

Listing of Claims

1. (Canceled)

2. (Currently amended) A compound of the formula (Ia):



(Ia)

wherein:

X′ is selected from the group consisting of -CH(R_9)-, -CH(R_9)-alkylene-, and -CH(R_9)-alkenylene-;

R_1 and R_1′ are independently selected from the group consisting of:

hydrogen,

alkyl,

cycloalkyl,

~~alkenyl,~~

aryl,

arylalkylenyl, and

~~heteroaryl,~~

~~heteroarylalkylenyl,~~

~~heterocyclyl,~~

~~heterocyclylalkylenyl, and~~

alkyl, cycloalkyl, ~~alkenyl,~~ aryl, or arylalkylenyl, ~~heteroaryl, heteroarylalkylenyl, heterocyclyl, or heterocyclylalkylenyl,~~ substituted by one or more substituents selected from the group consisting of:

hydroxy,

alkyl,

haloalkyl,

hydroxyalkyl,

alkoxy,

haloalkoxy, and

halogen,

~~cyano,~~

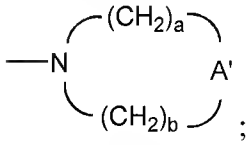
~~nitro,~~

~~arylsulfonyl,~~

~~alkylsulfonyl, and~~

~~$-N(R_9)_2$,~~

or R_1 and R_1' can join together to form a ring of the formula:



;

R_2 is selected from the group consisting of:

alkyl,

hydroxyalkyl, and

alkyloxyalkyl;

~~R_4 is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aryl, arylalkylenyl, aryloxyalkylenyl, alkylarylenyl, heteroaryl, heteroarylalkylenyl, heteroaryloxyalkylenyl, alkylheteroarylenyl, and heterocyclyl, wherein the alkyl, alkenyl, alkynyl, aryl, arylalkylenyl, aryloxyalkylenyl, alkylarylenyl, heteroaryl, heteroarylalkylenyl, heteroaryloxyalkylenyl, alkylheteroarylenyl, and heterocyclyl groups can be unsubstituted or~~

~~substituted by one or more substituents independently selected from the group consisting of alkyl, alkoxy, hydroxyalkyl, haloalkyl, haloalkoxy, halogen, nitro, hydroxy, mercapto, cyano, aryl, aryloxy, arylalkylenyloxy, heteroaryl, heteroaryloxy, heteroarylalkylenyloxy, heterocyclyl, amino, alkylamino, dialkylamino, (dialkylamino)alkylenyloxy, and in the case of alkyl, alkenyl, alkynyl, and heterocyclyl, oxo;~~

~~R_6 is selected from the group consisting of =O and =S;~~

~~R_8 is selected from the group consisting of hydrogen, alkyl, alkoxyalkylenyl, and arylalkylenyl;~~

R_9 is selected from the group consisting of hydrogen and alkyl;

A′ is selected from the group consisting of -O-, ~~-C(O)-~~, and $-CH_2-$, ~~$-S(O)_{0-2}-$, $-N(R_4)-$, and $-N(Q-R_4)-$~~;

~~Q is selected from the group consisting of a bond, $-C(R_6)-$, $-C(R_6)-C(R_6)-$, $-S(O)_2-$, $-C(R_6)-N(R_8)-W-$, $-S(O)_2-N(R_8)-$, $-C(R_6)-O-$, and $-C(R_6)-N(OR_9)-$;~~

~~W is selected from the group consisting of a bond, -C(O)-, and $-S(O)_2-$;~~

a and b are independently integers from 1 to 6 with the proviso that a + b is $\leq$ 7;

R_A and R_B are taken together to form either a fused 6-membered aryl ring that is unsubstituted or substituted by one or more R_a groups, or a fused ~~5-to-7-membered~~ 6-membered saturated ring that is unsubstituted or substituted by one or more R_c groups;

R_a is selected from the group consisting of:

fluoro,

alkyl,

haloalkyl,

alkoxy, and

$-N(R_9)_2$; and

R_c is selected from the group consisting of:

halogen,

hydroxy,

alkyl,

alkenyl,

haloalkyl,

alkoxy,

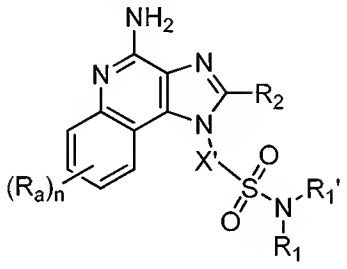
alkylthio, and

$-N(R_9)_2$;

or a pharmaceutically acceptable salt thereof.

3. (Canceled)

4. (Currently amended) A compound of the formula (II):



(II)

wherein:

X′ is selected from the group consisting of $-CH(R_9)-$, $-CH(R_9)$-alkylene-, and $-CH(R_9)$-alkenylene-;

R_1 and R_1' are independently selected from the group consisting of:

hydrogen,

alkyl,

cycloalkyl,

~~alkenyl,~~

aryl,

arylalkylenyl, and

~~heteroaryl,~~

~~heteroarylalkylenyl,~~

~~heterocyclyl,~~

~~heterocyclylalkylenyl, and~~

alkyl, cycloalkyl, ~~alkenyl,~~ aryl, or arylalkylenyl, ~~heteroaryl, heteroarylalkylenyl, heterocyclyl, or heterocyclylalkylenyl,~~ substituted by one or more substituents selected from the group consisting of:

hydroxy,

alkyl,

haloalkyl,

hydroxyalkyl,

alkoxy,

haloalkoxy, and

halogen,

~~cyano,~~

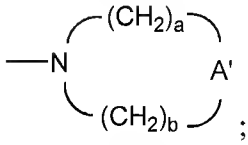
~~nitro,~~

~~arylsulfonyl,~~

~~alkylsulfonyl, and~~

~~$-N(R_9)_2$,~~

or R_1 and R_1' can join together to form a ring of the formula:



;

R_2 is selected from the group consisting of:

alkyl,

hydroxyalkyl, and

alkyloxyalkyl;

~~R_4 is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aryl, arylalkylenyl, aryloxyalkylenyl, alkylarylenyl, heteroaryl, heteroarylalkylenyl, heteroaryloxyalkylenyl, alkylheteroarylenyl, and heterocyclyl, wherein the alkyl, alkenyl, alkynyl, aryl, arylalkylenyl, aryloxyalkylenyl, alkylarylenyl, heteroaryl, heteroarylalkylenyl, heteroaryloxyalkylenyl, alkylheteroarylenyl, and heterocyclyl groups can be unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl,~~

~~alkoxy, hydroxyalkyl, haloalkyl, haloalkoxy, halogen, nitro, hydroxy, mercapto, cyano, aryl, aryloxy, arylalkylenyloxy, heteroaryl, heteroaryloxy, heteroarylalkylenyloxy, heterocyclyl, amino, alkylamino, dialkylamino, (dialkylamino)alkylenyloxy, and in the case of alkyl, alkenyl, alkynyl, and heterocyclyl, oxo;~~

~~R_6 is selected from the group consisting of =O and =S;~~

~~R_8 is selected from the group consisting of hydrogen, alkyl, alkoxyalkylenyl, and arylalkylenyl;~~

R_9 is selected from the group consisting of hydrogen and alkyl;

A′ is selected from the group consisting of -O-, ~~-C(O)-~~, and -CH_2-, ~~-S(O)$_{0-2}$-~~, ~~-N(R_4)-~~, and ~~-N(Q-R_4)-~~;

~~Q is selected from the group consisting of a bond, -C(R_6)-, -C(R_6)-C(R_6)-, -S(O)$_2$-, -C(R_6)-N(R_8)-W-, -S(O)$_2$-N(R_8)-, -C(R_6)-O-, and -C(R_6)-N(OR_9)-;~~

~~W is selected from the group consisting of a bond, -C(O)-, and -S(O)$_2$-;~~

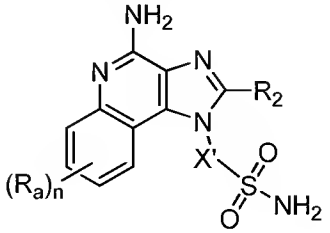
a and b are independently integers from 1 to 6 with the proviso that a + b is ≤ 7;

R_a is selected from the group consisting of fluoro, alkyl, haloalkyl, alkoxy, and -N(R_9)$_2$; and

n is 0 to 4;

or a pharmaceutically acceptable salt thereof.

5. (Currently amended) A compound of the formula (IIa):



(IIa)

wherein:

X′ is selected from the group consisting of -CH(R_9)-, -CH(R_9)-alkylene-, and -CH(R_9)-alkenylene-;

R_2 is selected from the group consisting of:

alkyl,

hydroxyalkyl, and

alkyloxyalkyl;

~~R_4 is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aryl, arylalkylenyl, aryloxyalkylenyl, alkylarylenyl, heteroaryl, heteroarylalkylenyl, heteroaryloxyalkylenyl, alkylheteroarylenyl, and heterocyclyl, wherein the alkyl, alkenyl, alkynyl, aryl, arylalkylenyl, aryloxyalkylenyl, alkylarylenyl, heteroaryl, heteroarylalkylenyl, heteroaryloxyalkylenyl, alkylheteroarylenyl, and heterocyclyl groups can be unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, alkoxy, hydroxyalkyl, haloalkyl, haloalkoxy, halogen, nitro, hydroxy, mercapto, cyano, aryl, aryloxy, arylalkylenyloxy, heteroaryl, heteroaryloxy, heteroarylalkylenyloxy, heterocyclyl, amino, alkylamino, dialkylamino, (dialkylamino)alkylenyloxy, and in the case of alkyl, alkenyl, alkynyl, and heterocyclyl, oxo;~~

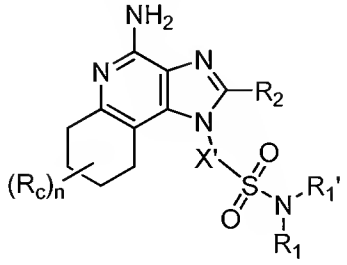
R_9 is selected from the group consisting of hydrogen and alkyl;

R_a is selected from the group consisting of fluoro, alkyl, haloalkyl, alkoxy, and $-N(R_9)_2$; and

n is 0 to 4;

or a pharmaceutically acceptable salt thereof.

6. (Currently amended) A compound of the formula (III):



(III)

wherein:

X′ is selected from the group consisting of $-CH(R_9)-$, $-CH(R_9)$-alkylene-, and $-CH(R_9)$-alkenylene-;

R_1 and R_1' are independently selected from the group consisting of:

hydrogen,

alkyl,

cycloalkyl,

~~alkenyl,~~

aryl,

arylalkylenyl, and

~~heteroaryl,~~

~~heteroarylalkylenyl,~~

~~heterocyclyl,~~

~~heterocyclylalkylenyl, and~~

alkyl, cycloalkyl, ~~alkenyl,~~ aryl, or arylalkylenyl, ~~heteroaryl, heteroarylalkylenyl, heterocyclyl, or heterocyclylalkylenyl,~~ substituted by one or more substituents selected from the group consisting of:

hydroxy,

alkyl,

haloalkyl,

hydroxyalkyl,

alkoxy,

haloalkoxy, and

halogen,

~~cyano,~~

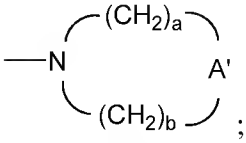
~~nitro,~~

~~arylsulfonyl,~~

~~alkylsulfonyl, and~~

~~$-N(R_9)_2$,~~

or R_1 and R_1' can join together to form a ring of the formula:



;

R_2 is selected from the group consisting of:

alkyl,

hydroxyalkyl, and

alkyloxyalkyl;

~~R_4 is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, aryl, arylalkylenyl, aryloxyalkylenyl, alkylarylenyl, heteroaryl, heteroarylalkylenyl, heteroaryloxyalkylenyl, alkylheteroarylenyl, and heterocyclyl, wherein the alkyl, alkenyl, alkynyl, aryl, arylalkylenyl, aryloxyalkylenyl, alkylarylenyl, heteroaryl, heteroarylalkylenyl, heteroaryloxyalkylenyl, alkylheteroarylenyl, and heterocyclyl groups can be unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, alkoxy, hydroxyalkyl, haloalkyl, haloalkoxy, halogen, nitro, hydroxy, mercapto, cyano, aryl, aryloxy, arylalkylenyloxy, heteroaryl, heteroaryloxy, heteroarylalkylenyloxy, heterocyclyl, amino, alkylamino, dialkylamino, (dialkylamino)alkylenyloxy, and in the case of alkyl, alkenyl, alkynyl, and heterocyclyl, oxo;~~

~~R_6 is selected from the group consisting of =O and =S;~~

~~R_8 is selected from the group consisting of hydrogen, alkyl, alkoxyalkylenyl, and arylalkylenyl;~~

R_9 is selected from the group consisting of hydrogen and alkyl;

A′ is selected from the group consisting of -O-~~, C(O)~~, and -CH_2-~~, $S(O)_{0-2}$, $N(R_4)$, and $N(Q\text{-}R_4)$~~-;

~~Q is selected from the group consisting of a bond, $C(R_6)$, $C(R_6)\text{-}C(R_6)$, $S(O)_2$, $C(R_6)\text{-}N(R_8)\text{-}W$, $S(O)_2\text{-}N(R_8)$, $C(R_6)\text{-}O$, and $C(R_6)\text{-}N(OR_9)$;~~

a and b are independently integers from 1 to 6 with the proviso that a + b is ≤ 7;

R_c is selected from the group consisting of halogen, hydroxy, alkyl, alkenyl, haloalkyl, alkoxy, alkylthio, and -$N(R_9)_2$; and

n is 0 to 4;

or a pharmaceutically acceptable salt thereof.

7.-11. (Canceled)

12. (Previously presented) The compound or salt of claim 4 wherein n is 0.

13. (Canceled)

14. (Currently amended) The compound or salt of claim 2 wherein R_1' is hydrogen or alkyl, and R_1 is selected from the group consisting of hydrogen, alkyl, aryl, substituted aryl, arylalkylenyl, and substituted arylalkylenyl~~, heteroaryl, and substituted heteroaryl~~.

15. (Currently amended) The compound or salt of claim 2 wherein R_1' is hydrogen or methyl, and R_1 is selected from the group consisting of hydrogen, methyl, ethyl, propyl, butyl, cyclohexyl, phenyl, 4-methoxyphenyl, benzyl, 4-methoxybenzyl, ~~2-pyridyl, 3-pyridyl,~~ 4-chlorophenyl, and 4-fluorophenyl.

16. (Original) The compound or salt of claim 15 wherein R_1 and R_1' are both hydrogen.

17. (Canceled)

18. (Previously presented) The compound or salt of claim 2 wherein R_1 and R_1' join together to form a morpholine ring.

19. (Canceled)

20. (Previously presented) The compound or salt of claim 2 wherein R_2 is selected from the group consisting of hydrogen, C_{1-4} alkyl, C_{1-4} alkyl-O-C_{1-4} alkylenyl, and HO-C_{1-3} alkylenyl.

21. (Original) The compound or salt of claim 20 wherein R_2 is selected from the group consisting of hydrogen, methyl, ethyl, *n*-propyl, *n*-butyl, hydroxymethyl, 2-hydroxyethyl, ethoxymethyl, and 2-methoxyethyl.

22. (Canceled)

23. (Previously presented) The compound or salt of claim 2 wherein X′ is $-(CH_2)_{1-7}-$.

24. (Previously presented) The compound or salt of claim 2 wherein X′ is $-(CH_2)-C(CH_3)_2-$.

25. (Previously presented) A pharmaceutical composition comprising a therapeutically effective amount of a compound or salt of claim 2 in combination with a pharmaceutically acceptable carrier.

26. (Withdrawn) A method of inducing cytokine biosynthesis in an animal comprising administering an effective amount of a compound or salt of claim 2 to the animal.

27. (Withdrawn and currently amended) A method of treating a viral disease in an animal in need thereof comprising administering a therapeutically effective amount of a compound or salt of claim 2 to the animal.

28. (Withdrawn) A method of treating a neoplastic disease in an animal in need thereof comprising administering a therapeutically effective amount of a compound or salt of claim 2 to the animal.

29.-38. (Canceled)

39. (Currently amended) The compound or salt of claim 4 wherein R_1' is hydrogen or alkyl, and R_1 is selected from the group consisting of hydrogen, alkyl, aryl, substituted aryl, arylalkylenyl, and substituted arylalkylenyl~~, heteroaryl, and substituted heteroaryl~~.

40. (Currently amended) The compound or salt of claim 4 wherein R_1' is hydrogen or methyl, and R_1 is selected from the group consisting of hydrogen, methyl, ethyl, propyl, butyl, cyclohexyl, phenyl, 4-methoxyphenyl, benzyl, 4-methoxybenzyl, ~~2-pyridyl, 3-pyridyl,~~ 4-chlorophenyl, and 4-fluorophenyl.

41. (Previously presented) The compound or salt of claim 4 wherein R_2 is selected from the group consisting of hydrogen, C_{1-4} alkyl, C_{1-4} alkyl-O-C_{1-4} alkylenyl, and HO-C_{1-3} alkylenyl.

42. (Previously presented) The compound or salt of claim 41 wherein R_2 is selected from the group consisting of hydrogen, methyl, ethyl, n-propyl, n-butyl, hydroxymethyl, 2-hydroxyethyl, ethoxymethyl, and 2-methoxyethyl.

43. (Previously presented) The compound or salt of claim 4 wherein X′ is -$(CH_2)_{1-7}$-.

44. (Previously presented) The compound or salt of claim 4 wherein X′ is -(CH_2)-$C(CH_3)_2$-.

45. (Previously presented) The compound or salt of claim 5 wherein n is 0.

46. (Previously presented) The compound or salt of claim 5 wherein R_2 is selected from the group consisting of hydrogen, C_{1-4} alkyl, C_{1-4} alkyl-O-C_{1-4} alkylenyl, and HO-C_{1-3} alkylenyl.

47. (Previously presented) The compound or salt of claim 46 wherein R_2 is selected from the group consisting of hydrogen, methyl, ethyl, n-propyl, n-butyl, hydroxymethyl, 2-hydroxyethyl, ethoxymethyl, and 2-methoxyethyl.

48. (Previously presented) The compound or salt of claim 5 wherein X′ is -$(CH_2)_{1-7}$-.

49 (Previously presented) The compound or salt of claim 5 wherein X′ is -(CH_2)-$C(CH_3)_2$-.

50. (Previously presented) The compound or salt of claim 6 wherein n is 0.

51. (Currently amended) The compound or salt of claim 6 wherein R_1′ is hydrogen or methyl, and R_1 is selected from the group consisting of hydrogen, methyl, ethyl, propyl, butyl, cyclohexyl, phenyl, 4-methoxyphenyl, benzyl, 4-methoxybenzyl, ~~2-pyridyl, 3-pyridyl,~~ 4-chlorophenyl, and 4-fluorophenyl.

52. (Previously presented) The compound or salt of claim 6 wherein R_1 and R_1′ are both hydrogen.

53. (Previously presented) The compound or salt of claim 6 wherein R_2 is selected from the group consisting of hydrogen, methyl, ethyl, n-propyl, n-butyl, hydroxymethyl, 2-hydroxyethyl, ethoxymethyl, and 2-methoxyethyl.

54. (Previously presented) The compound or salt of claim 6 wherein X′ is -$(CH_2)_{1-7}$-.

55.-60. (Canceled)

61. (Previously presented) A pharmaceutical composition comprising a therapeutically effective amount of a compound or salt of claim 4 in combination with a pharmaceutically acceptable carrier.

62. (Withdrawn) A method of inducing cytokine biosynthesis in an animal comprising administering an effective amount of a compound or salt of claim 4 to the animal.

63. (Previously presented) A pharmaceutical composition comprising a therapeutically effective amount of a compound or salt of claim 5 in combination with a pharmaceutically acceptable carrier.

64. (Withdrawn) A method of inducing cytokine biosynthesis in an animal comprising administering an effective amount of a compound or salt of claim 5 to the animal.

65. (Previously presented) A pharmaceutical composition comprising a therapeutically effective amount of a compound or salt of claim 6 in combination with a pharmaceutically acceptable carrier.

66. (Withdrawn) A method of inducing cytokine biosynthesis in an animal comprising administering an effective amount of a compound or salt of claim 6 to the animal.

67.-68. (Canceled)